Please amend the Claims as follows:

1-7. (Canceled)

8. (Previously Presented) An integrated circuit comprising:

at least one hardware module;

a memory for storing working context with respect to the at least one hardware module;

a microprocessor for transmitting the working context with respect to the at least one hardware module and its own working context to the memory in a power-off standby mode; and

a working context transmitting controller for transmitting the working context with respect to the at least one hardware module, the working context being stored in the memory, to a non-volatile memory outside the integrated circuit, in response to a predetermined command signal,

wherein the working context transmitting controller includes:

a direct memory access unit for inputting and outputting the working context between the memory and the non-volatile memory;

a control register including a plurality of registers, each of which has corresponding area information on the memory and/or the non-volatile memory;

an interface between the direct memory access unit and the non-volatile memory; and

a controller for transmitting the working context from the memory to the non-volatile memory through the interface during the power-off standby mode, and transmitting the working context stored in the non-volatile memory to the memory through the interface when the power-off standby mode is released.

9-12. (Canceled)

13. (Previously Presented) An integrated circuit comprising:

at least one hardware module;

a microprocessor for transmitting working context with respect to the at least one hardware module and its own working context to a memory outside the integrated circuit, in a power-off standby mode; and

a working context transmitting controller for transmitting the working context with respect to the at least one hardware module from the memory to a non-volatile memory outside the integrated circuit, in response to a predetermined command signal,

wherein the working context transmitting controller includes:

a direct memory access unit for inputting and outputting the working context between the memory and the non-volatile memory;

a control register including a plurality of registers, each of which has corresponding area information on the memory and/or the non-volatile memory;

an interface between the direct memory access unit and the non-volatile memory; and

a controller for controlling the working context to be transmitted from the memory to the non-volatile memory through the interface during the power-off standby mode, and controlling the working context stored in the non-volatile memory to be transmitted to the memory through the interface when the power-off standby mode is released.

14-21. (Canceled)

22. (Previously Presented) An integrated circuit comprising:

a plurality of hardware modules;

a memory for storing working context with respect to the plurality of hardware modules; and

a working context transmitting controller for transmitting the working context stored in the memory to a non-volatile memory outside the integrated circuit during a first operating mode, and transmitting the working context with respect to the hardware modules, which is stored in the non-volatile memory, to the memory during a second operating mode,

wherein at least one of the hardware modules is recovered to a state existing immediately before the first operating mode was executed by using the working context, which is transmitted from the non-volatile memory to the memory during the second operating mode,

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wherein the working context transmitting controller includes:

a direct memory access for inputting and outputting the working context between the memory and the non-volatile memory;

a control register including a plurality of registers, each of which has corresponding area information on the memory and the non-volatile memory;

an interface between the direct memory access and the non-volatile memory; and

a controller for controlling the working context to be transmitted from the memory to the non-volatile memory through the interface during the first operating mode, and controlling the working context stored in the non-volatile memory to be transmitted to the memory through the interface during the second operating mode.

23-26. (Canceled)

27. (Previously Presented) An integrated circuit comprising:

a plurality of hardware modules; and

a working context transmitting controller for transmitting working context with respect to the plurality of hardware modules from a memory outside the integrated circuit to a non-volatile memory outside the integrated circuit, during a first operating mode, and transmitting the working context with respect to the plurality of hardware modules stored in the non-volatile memory to the memory during a second operating mode,

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wherein the plurality of modules are recovered to a state existing immediately before the first operating mode was executed by using the working context transmitted from the non-volatile memory to the memory during the second operating mode,

wherein the working context transmitting controller includes:

a direct memory access unit for inputting and outputting the working context between the memory and the non-volatile memory;

a control register including a plurality of registers, each of which has corresponding area information on the memory and the non-volatile memory;

an interface between the direct memory access unit and the non-volatile memory; and

a controller for controlling the working context to be transmitted from the memory to the non-volatile memory through the interface during the first operating mode, and controlling the working context stored in the non-volatile memory to be transmitted to the memory through the interface during the second operating mode.

28-29. (Canceled)

30. (Previously Presented) A system comprising:

an integrated circuit having at least one hardware module; and

a non-volatile memory outside the integrated circuit,

wherein the integrated circuit includes:

a memory for storing working context with respect to the at least one hardware module; and

a working context transmitting controller for transmitting the working context stored in the memory to the non-volatile memory during a power-off standby mode, and transmitting the working context with respect to the at least one hardware module, which is stored in the non-volatile memory, to the memory when the power-off standby mode is released,

wherein when the power-off standby mode is released, the at least one hardware module is recovered to a state existing immediately before the power-off standby mode was executed by using the working context, which is transmitted to the memory,

wherein the working context transmitting controller includes:

a direct memory access unit for inputting and outputting the working context between the memory and the non-volatile memory;

a control register including a plurality of registers, each of which has corresponding area information on the memory and/or the non-volatile memory;

an interface between the direct memory access unit and the non-volatile memory; and

a controller for controlling the working context to be transmitted from the memory to the non-volatile memory through the interface during the power-off standby mode, and controlling the working context to be transmitted from the non-volatile memory to the memory through the interface when the power-off standby mode is released.

31. (Canceled)

32. (Previously Presented) A system comprising:

an integrated circuit including at least one hardware module;

a memory existing outside the integrated circuit for storing working context with respect to the hardware module; and

a non-volatile memory existing outside the integrated circuit,

wherein the integrated circuit includes a working context transmitting controller for transmitting the working context stored in the memory to the non-volatile memory during a power-off standby mode, and transmitting the working context with respect to the at least one hardware module, which is stored in the non-volatile memory, to the memory when the power-off standby mode is released,

wherein the at least one hardware module is recovered to a state existing immediately before the power-off standby mode was executed by using the working context transmitted from the non-volatile memory to the memory, when the power-off standby mode is released,

wherein the working context transmitting controller includes:

a direct memory access unit for inputting and outputting the working context between the memory and the non-volatile memory;

a control register including a plurality of registers, each of which has corresponding area information on the memory and/or the non-volatile memory;

an interface between the direct memory access unit and the non-volatile memory; and

a controller for controlling the working context to be transmitted from the memory to the non-volatile memory through the interface during the power-off standby mode, and controlling the working context stored in the non-volatile memory to be transmitted to the memory through the interface when the power-off standby mode is released.

33. (Previously Presented) The system of Claim 32, wherein the at least one hardware module is a microprocessor.

34-35. (Canceled)

36. (Previously Presented) The integrated circuit of Claim 8, wherein the integrated circuit is a system-on-a-chip.

37. (Previously Presented) The integrated circuit of Claim 13, wherein the integrated circuit is a system-on-a-chip.

38. (Previously Presented) The integrated circuit of Claim 22, wherein the integrated circuit is a system-on-a-chip.

39. (Previously Presented) The integrated circuit of Claim 27, wherein the integrated circuit is a system-on-a-chip.

40. (Previously Presented) The system of Claim 30, wherein the integrated circuit comprises a system-on-a-chip.

41. (Previously Presented) The system of Claim 32, wherein the integrated circuit comprises a system-on-a-chip.